



EVIDENTIARY ARGUMENT FOR UNIQUE ART

The Computer Program Operation Interface as presented in the specifications of this patent application document should be found as unique art not previously protected or disclosed based on the following comparison of this invention to previous art cited in this "Office Action Summary":

COMPUTER PROGRAM OPERATION INTERFACE

1. Number of program actuator switches: this invention contains two X-Y axis rollerball sensors and four on/off microswitches mounted in its base, all six switches available for independent and simultaneous input into the computer.
2. Manipulation of actuator switches: this invention is designed so that the rollerball in the horizontal base platform is manipulated with a slight wrist action, the rollerball in the vertical tab is manipulated with a rotary action of the thumb, and the four on/off microswitches are activated by slight pressure on the finger pads by each of the four fingers. This allows all six switches to be manipulated independently and simultaneously.
3. Input driver and software: this invention includes program-able software written in Python language allowing the program actuator switches to be configured to the users personal needs and makes the input device compatible with all hardware and software programs.
4. Ergonomic value: this invention is designed to incorporate an egg-shaped body that completely fills the palm cavity of a relaxed hand in the natural position fully supporting the inside surface of the hand and fingers and supporting the entire weight of the hand on the palm itself. The hand is allowed to function in a position horizontal to the work surface which relieves stress on the forearm. The thumb remains in a natural position 90 degrees from the fingers. There is no extension of the fingers required eliminating tension on the muscles and tendons of the metacarpal area of the hand. The only required movement required to manipulate the device and actuate the six switches is slight rotation of the thumb, slight lateral movement of the wrist, and slight pressure on the finger pads by the fingers.

REFERENCE CITATION HAMLINE (U S 5, 648,798

1. Number of program actuator switches: this invention contains a rollerball switch mounted in the base and a rollerball mounted in the upper portion, both of which are connected to a switch allowing the operation of either one or the other prohibiting both from being used at any one time. It also contains "at least one button" to be operated by the three fingers available for input function with potentially three input buttons to be located on the upper portion of the invention. This makes a total of five switches on the invention, only four of which can be operated at one time.
2. Manipulation of the switches: this invention is designed so that the mouse tracker is operated either by the thumb or radial movement of the wrist depending on the actuator selected by the toggle switch. The potentially three buttons located on the upper portion of the invention must be operated by the index, middle, and ring fingers. The weight of the hand is borne by the little finger making it unavailable to perform input functions. This allows the manipulation of no more than four actuator switches at any one time.
3. Input driver and software: There is no mention of software with this invention.
4. Ergonomic value: this invention is designed to incorporate a cone-shaped upper portion and a base with a support ledge for the hand. The cone-shape does not conform to the natural position of a relaxed hand in that the palm cavity is egg-shaped when relaxed. The cone shape requires an unnatural extension of the metacarpal area of the ring and little finger to an unnatural position. The vertical position of the palm to the work surface is also unnatural putting stress on the forearm. The weight of the entire hand is borne by the metacarpal area of the little finger which rests in an extended position. Radial movement is required to operate the rollerball in the base of the device.

REFERENCE CITATION DAVENPORT (U S 6,828,958)

1. Number of program actuator switches: this invention contains four switches on the top surface, a mouse tracker means connected to the base, and a clutch switch to disengage the mouse tracker means. This represents five program actuator switches, one of which can be disengaged by the operator if desired.
2. Manipulation of program actuator switches: this invention is designed so that the index finger manipulates the four switches on the top of the device while lateral action of the wrist manipulates the mouse tracker means when not disengaged by the clutch switch. This device allows manipulation of only two program actuator switches at any one time using the thumb and two fingers to manipulate the mouse tracker means.
3. Input driver and software: there is no input software stipulated, only software controlling the indicator light on the device.
4. Ergonomic value: the device's ergonomic claim is to be able to disengage the mouse tracker means with the clutch switch allowing the user to move the device without lifting it from the work surface. The hand must be distorted into a very unnatural position to operate the device.

REFERENCE CITATION McLOONE (U S 6,590,564)

1. Number of program input switches: this invention has one roller-ball switch on the thumb side surface, one wheel switch on the finger side surface, and four pressure switches on the finger side surface. (Note; there is a discrepancy in the numbering of the switches calling the wheel switch and one of the pressure switches "said second actuator including a wheel" a second and third button") This makes a total of six switches on the device.
2. Manipulation of the program actuator switches: this invention is designed so that the thumb manipulates the first rollerball actuator, the middle finger manipulates the wheel actuator, and the index and ring finger manipulate the second (misnumbered), third, fourth, and fifth pressure actuator switches. This allows manipulation of no more than four program actuator switches at any one time independently and simultaneously.

3. Input driver and software: There is no input software stipulated in this invention.
4. Ergonomic value: this invention is designed to generally support the weight of the hand on the palm and metacarpal region of the fingers but it requires unnatural extension of the fingers and thumb leaving the phalanges to function outstretched in a position parallel to the work surface. There is nothing that supports the thumb leaving the weight of the thumb on the metacarpal region. The fingers must function by lateral and radial movement of the metacarpal region and said region must also support the weight of the fingers. This device presents no advantage over devices commonly used today.

CONCLUSION

The Computer Program Operation Interface described in this invention is innovative, unique, and embodies objectives not accomplished by any of the previous art citations included in the "Notice of References Cited" in this action. A detailed evaluation and comparison of the preferred embodiments and principle objectives of each invention demands the following conclusions:

1. This invention contains six activator switches that can be used independently to perform program functions which exceeds two of the three citations.
2. This new invention allows independent and simultaneous manipulation of all six actuator switches which exceeds the functionality of all three citations.
3. This invention stipulates software that enhances the functionality and compatibility

more hardware, complex programs, and computer games which is not part of any of the three citations.

4. This invention has ergonomic value which far surpasses that of all the previous art citations because it allows the hand to function in a completely natural and relaxed position totally eliminating stress on the metacarpal area of the hand and greatly reducing the potential for worker injury.

This Computer Program Operation Interface is superior in design, functionality, and ergonomic benefit to any of the previous art cited or to any mouse interface devices currently on the market today. Because of its unique and advanced technology this device must be considered unique art and allowed patent rights as as a new invention which makes the old obsolete.